Diffuse leakage through an 8-month-old Dacron graft after thrombolysis with tissue plasminogen activator

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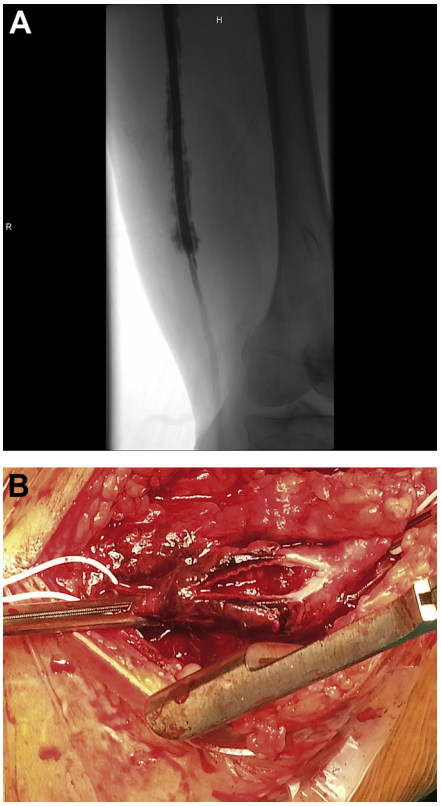
A 56-year-old man was admitted to our department with acute critical left leg ischemia. He had undergone multiple arterial reconstructions of the affected leg over the past 2 years. The last reconstruction was a femorotibial composite silver-impregnated Dacron autologous saphenous vein bypass. Digital subtraction angiography (DSA) showed occlusion of the graft; therefore, selective transcatheter thrombolysis with tissue plasminogen activator ([tPA] alteplase) was started. The 10-mg bolus dose was followed by continuous infusion at a rate of 2.0 mg/h. In addition, heparin was administered intravenously, starting at 500 IU/h and adjusted according to activated clotting time. DSA performed 8 hours later demonstrated almost complete resolution of the thrombus but revealed a significant stenosis at the graft-vein anastomosis. The silver-impregnated graft was leaking diffusely (*A*), but the bleeding was confined to the perigraft fibrous capsule (*B*). Considering the possible risk of major bleeding or graft failure at balloon angioplasty/stenting, open surgical graft revision was performed. The stenotic segment was replaced with a short Dacron interposition. The patient was discharged 5 days later with palpable peripheral pulses.



Intra-arterial thrombolysis with tPA or urokinase is a nonsurgical treatment option for acute critical lower-extremity ischemia caused by graft occlusion.[1] Although starting thrombolysis 10 to 14 days after surgery is generally accepted to be safe, no exact treatment guidelines concerning dosage, timing, route, and duration of tPA administration are available.[2,3]

In our case, a silver collagen-coated polyester graft had been implanted 8 months earlier. No signs of perigraft infection were present, and the graft was well incorporated into the surrounding tissues. However, control DSA demonstrated diffuse leakage through the whole prosthesis. This phenomenon has not yet been observed in our practice (>100 patients) with tPA thrombolysis. In this case, thrombolysis and reconstruction of the culprit stenosis saved the patient's leg, but care should be taken when performing thrombolysis of grafts implanted 8 months ago because of the possibility of leakage. Absence of perigraft fibrotic capsule in the case of ongoing infection may lead to severe bleeding.

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